

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 1, line 33 with the following amended paragraph:

As shown in FIG. 1, such solid polymer fuel cells are composed of a stack of from several tens to several hundreds of unit cells. Each unit cell has a pair of fuel cell separators 1, 1 with a plurality of ribs 1a on either side thereof. Between the separators 1 are disposed a solid polymer electrolyte membrane 2 and a pair of gas diffusing electrodes (a fuel ~~el-etrode~~ electrode and an oxidant ~~el-etrode~~ electrode) 3, 3.

Please replace the paragraph beginning on page 2, line 3 with the following amended paragraph:

Of the components making up this type of fuel cell, the fuel cell separator has the distinctive shape of a thin plate provided on one or both sides thereof with a plurality of ~~flow channels~~ flow channels 4 for the supply and removal of gases. The separator plays several important roles, one of which is to separate the fuel gas, oxidant gas, and cooling water flowing through the fuel cell to keep them from mingling. In addition, it carries away electrical energy generated by the cell, and dissipates to the exterior heat that has formed within the cell. Accordingly, a need has been strongly felt for fuel cell separators which, in addition to having gas barrier properties, electrical conductivity and corrosion resistance, also have sufficient mechanical strength to resist cracking and breaking of the separators from the tightening of bolts and nuts during fuel cell assembly, and which moreover are endowed with excellent vibration and impact resistance when the fuel cell is used as a mobile power supply such as in automobiles.

Please replace the paragraph beginning on page 5, line 1 with the following amended paragraph:

By using a mixture of phenolic novolac resin, ~~benzoxazin~~ benzoxazine resin and polycarbodiimide resin as the thermosetting resin in the above-described resin composition, there can be obtained a separator endowed with excellent mechanical strength and heat resistance even when of small thickness. That is, when the above mixture is used as the thermosetting resin, the separator cures by means of crosslinking reactions between the phenolic novolac resin, the benzoxazine resin and the polycarbodiimide resin. One result is a much lower volatiles content than when curing is achieved by a conventional reaction between a phenolic novolac resin and hexamethylenetetramine (hexamine).

Please replace the paragraph beginning on page 6, line 1 with the following amended paragraph:

Illustrative ~~example-s~~ examples of the internal release agent include carnauba wax, fatty acid ~~est-rs~~ esters, metal salts of stearic acid, and metal salts of montanic acid. Of these, carnauba wax is preferred because it is substantially free of leachates in hot water.

Please replace the paragraph beginning on page 8, line 2 with the following amended paragraph:

Aside from increasing the proportions of ~~th-resin~~ the resin components to 1.33 times the respective levels in Example 1 and reducing the amount of bulk graphite accordingly, fuel cell separators 1 were produced in the same way as in Example 1.

Please replace the paragraph beginning on page 8, line 35 with the following amended paragraph:

Aside from keeping the proportions of the resin composition the same but having the resin components consist instead of a mixture of phenolic novolak resin with the curing agent hexamine, ~~fuel cell~~ fuel cell separators 1 were produced in the same way as in Example 1.